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TITLE : HIGH ALLOY STAINLESS STEEL FOR CHIMNEY, FLUE AND DESULFURIZING EQUIPMENT HAVING EXCELLENT CORROSION RESISTANCE

ABSTRACT : PURPOSE: To obtain the subject stainless steel having excellent corrosion resistance (general corrosion resistance and crevice corrosion resistance) by the minimum addition of alloy elements by regulating its compositional critical value.

CONSTITUTION: An alloy contg., by weight, 0.004 to 0.05% C, ≤5% Si, ≤2% Mn, 18 to 25% Cr, 14 to 24% Ni, 1 to 4.5% Mo, 0.5 to 2.0% Cu, ≤0.05% Al and 0.01 to 0.3% N, contg. ≤0.03% P, ≤100ppm S and ≤50ppm O and the balance substantial iron with inevitable impurities is refined. At this time, the above steel is furthermore regulated so that general corrosion resisting index (GI value) and crevice corrosion resisting index (CI value) under the environment of a chimney, a flue and desulfurizing equipment simultaneously satisfy the below conditions; where GI value=-Cr+3.6Ni+4.7Mo+11.5Cu is regulated to $60 \leq GI \leq 90$ and CI value=Cr+0.4Ni+2.7Mo+Cu+18.7N is regulated to $35 \leq CI \leq 50$.

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